

What is claimed is:

1. An information processing apparatus, having  
an object network as a language processing  
5 function and a common platform as an  
interface function with clients, for  
executing processes using an interface with  
concerned parties of the process and / or  
an environment, comprising:
- 10 the object model having a hierarchical  
structure composed of,  
a data model representing an attribute  
structure as a set of templates;
- 15 an object model as a higher model than the  
data model;
- a role model as a higher model than the object  
model, the role model representing the content of a  
process to be executed in the environment as a set  
of a plurality of object models; and
- 20 a process model as the highest model, the  
process model defining a dynamic process  
cooperatively executed by a plurality of role  
models as one process.
- 25 2. The information processing apparatus as set

forth in claim 1,

wherein the object model has:

a format model representing a pattern of a noun object and a verb object;

5 a feature model representing a feature of the object corresponding to an attribute value of the object and having a constraint condition corresponding to the environment; and

10 an object network model having a graph structure of which the name of the noun object is represented as a node and the name of the verb object is represented as a branch.

3. The information processing apparatus as set  
15 forth in claim 1, further comprising:

a process function kernel portion for executing a controlling process performed with an intervention of a user of the information processing apparatus using the name of a concerned party for the process of the object network and the name of a work performed by the concerned party.

4. The information processing apparatus as set  
forth in claim 1,

25 wherein the specifications of the data model,

the object model, and the role model are statically defined, and

wherein the specifications of the process model are dynamically defined so that the validity 5 of the process performed in the set of the plurality of object modes is assured corresponding to a consistency constraint entity defined as an attribute of an object.

10 5. The information processing apparatus as set forth in claim 4,

wherein an inconsistent constraint entity corresponding to the process model describes a validity predicate about the validity of the 15 process and a control state for executing the process.

6. The information processing apparatus as set forth in claim 1,

20 wherein the hierarchical structure is further composed of:

a reference model for accomplishing a basic service to be executed in the process of the object network, the reference model being orthogonal to 25 the hierarchical structure of the data model, the

object model, the role model, and the process model.

7. The information processing apparatus as set forth in claim 6,

5 wherein the concerned party of the process and the process function kernel portion of the information processing apparatus use a reference driving function so as to accomplish a service of the reference model.

10 8. The information processing apparatus as set forth in claim 6,

wherein the specifications corresponding to a change of the environment are separately described  
15 as static adaptation specifications and dynamic adaptation specifications as a service accomplished with the reference model.

9. The information processing apparatus as set  
20 forth in claim 1, further comprising:

a WELL system as software using the object network and the common platform; and

software exporting means for exposing the WELL system to another software.

10. The information processing apparatus as set forth in claim 1, further comprising:

5 system structure designing means for designing a system structure in such a manner that noun objects and verb objects that compose the object network correlate with data paths as keywords of the system structure.